Complete Summary

GUIDELINE TITLE

Manual medicine guidelines for musculoskeletal injuries.

BIBLIOGRAPHIC SOURCE(S)

Braddock EJ, Greenlee J, Hammer RE, Johnson SF, Martello MJ, O'Connell MR, Rinzler R, Swanson MR, Tain L, Vogel JA, Walsh G. Manual medicine guidelines for musculoskeletal injuries. California: Academy for Chiropractic Education; 2004 Dec 1. 25 p. [39 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Musculoskeletal injuries

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Chiropractic

INTENDED USERS

Chiropractors
Health Care Providers
Health Plans
Managed Care Organizations
Patients
Utilization Management

GUIDELINE OBJECTIVE(S)

To provide recommendations for evaluation, diagnosis, and treatment of musculoskeletal injuries

TARGET POPULATION

Individuals with musculoskeletal injuries

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Medical history including mechanism of injury, symptoms, treatment to date, current complaints, job duties, past medical history, family history, and psychological factors that may delay recovery
2. Physical examination including general appearance, vital signs, ranges of motion, neurological examination, gait analysis, and additional testing as indicated
3. Diagnostic tests including x-rays, magnetic resonance imaging, computed tomography, and laboratory studies if indicated

Treatment/Management

1. Patient education regarding recovery process, treatment options, over-the-counter medication use, need for prescription medication, and reasonable expectations
2. Manual therapy/manipulation (SMT)
3. Complimentary procedures including manual traction, neuromuscular re-education, myofascial release, trigger point therapy, muscle stretch techniques, mobilization, use of supports, braces, splints or orthotics, physical medicine modalities and procedures
4. Exercises
5. Referral to a specialist if indicated

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus
Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Decision Analysis
Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus
Expert Consensus (Consensus Development Conference)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

History

A thorough history needs to be taken from the patient. It needs to include but not be limited to:

Mechanism of Injury

- Details of accident
- Specific or cumulative trauma
- Body parts involved initially or recruited due to altered mechanics

Symptoms

- Immediate, later same day, next day, and up to date of evaluation
- Improving, getting worse, or staying the same
- Relieving or aggravating conditions
- Fever
- Changes in bowel or bladder

Treatment to Date

- Names of physicians
- Type of treatment
- Current medications
- Response to prior treatment

Current Complaints

- Intensity, frequency, and duration
- Quality/type of pain/altered sensation
- Impairment or effect on daily activities

Job Duties

- For usual work, types of activities required, how often during a work period the activity is performed
- Modified work duties
- Other physical activities unable to do because of injury

Past Medical History

- General health
- Changes in appetite, weight, energy level, sleep pattern
- Other industrial injuries or motor vehicle accidents
- Previous awards or disability
- Surgeries
- Fractures
- Family history of similar complaints/symptoms
- Other traumas
- Other risk factors (e.g., weight, tobacco, alcohol, drugs, or hobbies)

Family History

Psychosocial Factors That May Delay Recovery

Examination

- General appearance (development, nutrition, body habitus, deformities)
- Vital signs
- Physical
- Orthopedic
- Ranges of motion, compare bilaterally when available
- Examine adjacent body parts (e.g., extremities)
- Neurological, including pathological neurological signs or absence
- Postural inspection, percussion, and/or palpation
- Gait analysis
- Include other necessary tests to determine diagnoses
- Additional testing as indicated may include:
    - Muscle strength and tone
    - Girth measurements in the extremities
    - Functional muscle testing
    - Vascular testing

Diagnostic

Typically x-rays are not indicated within the first 30 days of injury unless one of the following is present:

- Fever 100+ for 48 hours
- Unrelenting night pain or pain at rest
- Aberrant pain, paresthesia, or numbness
- Motor deficit
- Progressive neurological deficit

- Significant trauma causing suspicion of fracture
- Suspicion of ankylosing spondylitis or metabolic disease
- Progressive scoliosis
- Drug or alcohol abuse
- Chronic use of steroids
- Age over 50
- History of chronic pain in same body part
- Previous spinal surgery to same body area
- Unexplained weight loss or changes in bowel/bladder

X-ray or other diagnostic studies may be performed if patient fails to respond in 4 weeks or experiences a significant increase in symptoms or impairment.

Testing should be done with best clinical judgement to establish or support the diagnosis or for the necessary treatment of the patient.

Indications for Magnetic Resonance Imaging (MRI), Computed Tomography (CT), or Laboratory Studies

MRI Indications

- Loss of bowel or bladder control
- Progressive neurological deficit
- Myelopathy
- Suspected metastasis
- Tumor
- Osteomyelitis
- Disc disease
- Paraspinal abscess/fluid
- Vascular malformation
- Compression fracture
- Congenital spinal anomalies
- Post-surgical MRI w/gadolinium

CT Indications

- Refractory radiculopathy
- Focal motor deficit
- Fracture
- Foreign bodies
- Post-operative assessment
- Congenital/developmental fracture or abnormalities
- Where MRI contraindicated (pacemaker, implants, claustrophobia)

Laboratory Indications

- Persistent fever
- Multiple or migrating joint pain or swelling
- Lack of response to treatment determined to be appropriate for the diagnosis
- Suspicion or family history of systemic, metabolic, rheumatoid, or autoimmune conditions

Patient Education

It is important that the patient understand that, barring any complicating factors, most sprain/strains injuries improve within 2 weeks or note significant improvement with 4 weeks (90%).

It is not uncommon (50%) for patients who recover from the initial episode to have another episode, but again improvement is to be expected.

Discuss the diagnosis and treatment options for the diagnosis.

Instruct patients in self-guided care. This may include:

- Limited bed rest with gradual return to normal activities
- Activities or positions to limit or avoid
- Ambulation, to stay active and continue ordinary daily activities within limits permitted by pain
- Posture and proper body mechanics
- Gentle stretching
- Ice/heat

Discuss patient's use of over-the-counter (OTC) medications or need for prescriptive medication.

Discuss reasonable expectations for resolution of symptoms, and return to work or other activities. Inform patient that working, despite some residual discomfort, does not usually pose a threat and will not cause additional harm.

Treatment

Manual Therapy/Manipulation (SMT)

- Effect is to normalize joint mobility and nerve function in addition to pain reduction, with frequent compensatory changes in other areas of spinal function. Secondary changes in peripheral neurological function and may include relief from somatic pain syndromes, nerve compression syndromes, functional disorders, anatomical pain syndromes, and psychosomatic pain syndromes.
- Primary focus is on joint fixation, which may begin as muscular hypertonicity progressing to ligamentous shortening and ultimately leading to articular adhesions if not corrected. The mechanism for blockage of articular movement may involve mechanical joint locking, disc displacement, and/or intra-articular jamming of various tissues.
- Complimentary procedures: Intended to normalize joint function, decrease muscle spasm, reduce edema or inflammation, increase joint mobility, increase soft tissue flexibility, decrease pain, and maximize integrity of fibrotic repair. Includes manual traction, neuromuscular re-education, myofascial release, trigger point therapy, muscle stretch techniques, mobilization, and use of supports, braces, splints, or orthotics. Physical medicine modalities and procedures may be of benefit in conjunction with manipulation.

Exercise

Introduce within 1 week of initiating modalities/manipulation.

- Acute: Temporarily limit or avoid specific activities known to increase or aggravate mechanical stress on the injured region.
- Sub-acute: Strengthening exercises for the injured region can usually commence 2 weeks after the injury.
- Chronic: Strengthening and stabilization exercises for the injured region can commence immediately.

Gradual increase in time per session, amount, and intensity of exercises as the patient demonstrates improvement.

Discontinue exercise program if peripheralization (spread of symptoms) occurs.

There are patients with unremitting chronic pain, physical deconditioning, and disability who have been unresponsive to previous appropriate methods of conservative therapy. Their treatment should include a complete evaluation (including objective measures of function) and a treatment plan including spinal manipulative treatment, physical medicine, pain management, and physical conditioning such as therapeutic and rehabilitative exercise to help promote functional recovery.

Patients with chronic pain syndrome, whose pain problems have become intractable in spite of initial and secondary treatment, may benefit from evaluation and treatment including spinal manipulative and physical medicine procedures and modalities. Chronic pain syndrome is defined as persistent pain which lasts more than three months and which interferes with psychological or physiological function or which requires ongoing treatment. In general, chronic pain syndrome deals with musculoskeletal conditions, neurological disorders, and psychological issues including drug dependence, high levels of stress and anxiety, failed back surgery syndrome, and pre-existing or latent psychopathology. The condition is not expected to completely resolve but treatment can be expected to result in some functional improvement.

For information on Contraindication or Modifications of Spinal Manipulation refer to the "Contraindications" field in this summary.

Refer to the original guideline document for information about definitions and principles of care, criteria for referral, temporary disability, and complicating factors.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate evaluation, diagnosis, and treatment of musculoskeletal injuries

POTENTIAL HARMS

Not stated

CONTRAINDICATIONS

CONTRAINDICATIONS

Contraindications or Modifications of Spinal Manipulations

- Severe sprain/strains: Due to increased instability, refer for surgery if necessary and manipulate areas of fixation.
- Rheumatoid Arthritis: Due to potential transverse ligament rupture, forceful manipulation is contraindicated. Use soft tissue and mobilization techniques with light manipulation.
- Psoriasis: Due to potential transverse ligament rupture, forceful manipulation is contraindicated. Use soft tissue and mobilization techniques with light manipulation.
- Psychological conditions:
    - Malingering: release patient
    - Hysteria: refer patient for psychological counseling.
    - Hypochondriasis Dependent Personality: re-evaluate and wean with reassurance.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Braddock EJ, Greenlee J, Hammer RE, Johnson SF, Martello MJ, O'Connell MR, Rinzler R, Swanson MR, Tain L, Vogel JA, Walsh G. Manual medicine guidelines for musculoskeletal injuries. California: Academy for Chiropractic Education; 2004 Dec 1. 25 p. [39 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004 Dec 1

GUIDELINE DEVELOPER(S)

Academy for Chiropractic Education

SOURCE(S) OF FUNDING

Academy for Chiropractic Education

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: Eddie J. Braddock, DC, DABCO, FICC; James Greenlee, DC, DABCO; Ronald E. Hammer, DC, DABCO; Steven F. Johnson, DC, DABCO, FICC; Michael J. Martello, DC, DABCO, FICC; Michael R. O'Connell, DC, FICC; Richard Rinzler, DC, DACBSP, FICC; Mitchell R. Swanson, DC, FICC; Lawrence Tain, DC, FICC; John A. Vogel, DC, FICC; Gayle Walsh, DC, FICC

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available from Dr. Michael R. O'Connell, D.C., F.I.C.C., Academy for Chiropractic Education, 525 South Fairmont Avenue, Suite D, Lodi, CA 95240

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 19, 2005. The information was verified by the guideline developer on October 21, 2005.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx.

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 9/25/2006